

### REMARKS

The Office Action dated July 28, 2003, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto. Applicants respectfully note that no new matter has been entered through the above amendments. Through the above amendments, the subject matter of claim 6 has been incorporated into claim 1, claim 3 has been placed in independent form, claim 4 has been made to depend from claim 3 and claim 6 has been cancelled. Thus, claims 1-5 are respectfully submitted for consideration.

Claims 1, 2, 5, and 6 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Hoffman et al.* (U.S. Patent No. 6,094,435). Claims 3 and 4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hoffman et al.* The above rejections, as may be reasserted against the claims as amended, are respectfully traversed according to the remarks that follow.

The present invention is directed to, according to claim 1, a method for managing congestion in a network switch. The method includes the steps of receiving an incoming packet on a first port of a network switch for transmission to a destination port, determining if the destination port is a monitored port, determining a queue status of the destination port, if the destination port is determined to be a monitored port and prescheduling transmission of the incoming packet to the destination port if the destination port is determined to be a monitored port. Additionally, the network switch is one of a plurality of network switches configured in a stack.

The present invention is also directed to, according to claim 3, a method for managing congestion in a network switch. The method includes the steps of receiving an incoming packet on a first port of a network switch for transmission to a destination port, determining if the destination port is a monitored port, determining a queue status of the destination port, if the destination port is determined to be a monitored port and prescheduling transmission of the incoming packet to the destination port if the destination port is determined to be a monitored port. The prescheduling step of further includes the steps of classifying the queue status of the destination port and taking action in accordance with the classification of the queue status. Additionally, the classifying step further includes the steps of classifying the queue status of the destination port as a first type if a level of data in the queue is less than or equal to a first predetermined level, classifying the queue status of the destination port as a second type if the level of data in the queue is less than or equal to a second predetermined level and greater than the first predetermined level and classifying the queue status of the destination port as a third type if the level of data in the queue is greater than the second predetermined level.

The invention, as defined in independent claims, is directed to methods of servicing the CoS queues at a source IPIC based upon the egress port queue status across the stack, as opposed to servicing the queues based upon CoS priority. Through servicing the queues based upon the egress queue status, the method effectively considers the CoS priority in conjunction with the egress queue status, which in turn minimizes port congestion and transmission delay across the stack.

*Hoffman et al.* is directed to a multi-layer network element for forwarding received packets from an input port to one or more output ports with quality of service. When output queues exceed or meet a threshold value below the queue's capacity, packets are randomly discarded. When the queue becomes full, the network element determines which flow caused the queue to overflow. The priority of that flow is lowered. Scheduling of multiple output queues at each output port uses a weight round robin approach that allocates a weight portion of packets to transmit at each time interval.

The Office Action alleges that "the system disclosed by Hoffman is configured in multi-layer . . . it indicates that the network element (switch) is one of a plurality of network elements configured in a stack." While the Office may be correct that the network elements may be "multi-layer," that does not mean that those network elements are "stacked." Stacked network switches are illustrated in Fig. 26 of the present specification and described in the specification at page 101, line 26 to page 104, line 9. Given the use of the limitation "stack" in the specification and claims, Applicants respectfully assert that the network elements disclosed in *Hoffman et al.* are not stacked and *Hoffman et al.* cannot be used to anticipate claim 1, where the stacking of network switches is specifically recited.

Additionally, Applicants also respectfully assert that *Hoffman et al.* also fails to suggest the network switch is one of a plurality of network switches configured in a stack. The present invention is concerned with servicing CoS queues at a source stacking link based upon the egress port queue status across the stack. Given the discussion of the

use of global priority information in *Hoffman et al.*, Applicants respectfully assert that there would have been no motivation for one of ordinary skill in the art at the time the invention was made to create stacking connections in *Hoffman et al.* or applying the methods of *Hoffman et al.* to arrays of switches have stacked connections.

Turning now to the rejection of claims 3 and 4, with claim 3 now in independent form, the Office alleged that those claims were obvious in view of *Hoffman et al.* It is acknowledged, in the Office Action, that *Hoffman et al.* fails to teach three types of queues or that a full queue is classified as a third type. However, the Office takes the position that modifications would have been obvious to one of ordinary skill in the art in view of *Hoffman et al.* The rejection of claims 3 and 4 is respectfully traversed.

The sections of *Hoffman et al.* relied upon for its alleged teaching are the sections dealing with global priority information, i.e. column 19, line 53 through column 20, line 17. The thresholds discussed in *Hoffman et al.* are priority thresholds and not “a level of data in said queue,” as recited in claim 3. The section of *Hoffman et al.* is directed to mapping the global priority bits associated with the packet onto local priority bits. This is not the same as provided for in claim 3, where level of data in a queue is classified based on several thresholds. By comparison, *Hoffman et al.* merely describes that when a queue exceeds or meets a threshold, packets are randomly discarded. Given the different functionalities of *Hoffman et al.* and the embodiment of the present invention claimed in claim 3, Applicants respectfully assert that one of ordinary skill in the art would not have been motivated to modify the teachings of *Hoffman et al.* to reach the subject matter of

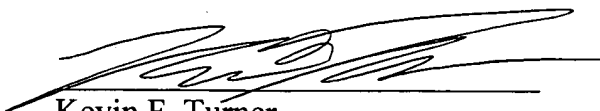
claim 3. Reconsideration and withdrawal of the rejection of claim 3 are respectfully requested.

Thus, Applicants respectfully assert that any rejection of claims 1 and 3 over *Hoffman et al.* would be improper for failing to teach or suggest all of the elements of those claims. On the basis of the above, independent claims 1 and 3 are respectfully asserted to be patentable, and as a consequence the dependent claims 2, 4 and 5 are patentable as well.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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